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New PCT National Phase Application
Docket No. 32860-001017/US

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SUBSTITUTE SPECIFICATION

DEVICE FOR DETECTING CONTACT WEAR IN SWITCHING APPLIANCES

[0001] This application is the national phase under 35 U.S.C. § 371 of PCT International Application No. PCT/DE2004/002121 which has an International filing date of September 17, 2004, which designated the United States of America and which claims priority on German Patent Application number 103 45 183.8 filed September 29, 2003, the entire contents of which are hereby incorporated herein by reference.

Field

[0002] The present invention generally relates to an apparatus for detection of contact erosion in switching devices. In at least one embodiment, it relates to an apparatus for detection of contact erosion on the switching contacts in an electrical switching device.

Background

[0003] The opening and closing switching contacts for switching currents in an electrical switching device result in switching arcs between the switching contacts. These switching arcs lead to increasing contact erosion on the switching contacts, and thus to wear of the switching contacts. Since this wear influences the switching behavior of the switching device, the contact erosion of the switching contacts must be monitored.

[0004] EP 1 022 904 A1 discloses the use of a camera for imaging monitoring of the wear of the switching contacts. Another apparatus which is disclosed in EP 1 022 904 A1 for monitoring the wear is numerical monitoring with the aid of a